REMARKS

Very thanks for Examination's suggestion and thanks for finding some citations about the present invention, thereby, the applicant may know more information about the invention. This case has been carefully reviewed and analyzed in view of the office action.

Responsive to the objections and rejections made of the Examiner in office action. We have amended claims. All the errors disclosed in that office action has been corrected according to the Examiner's indications disclosed in the official action.

Applicant requests and authorizes Examiner to amend the claims of the present invention so that they can match the requirement of U. S. Patent. Attentions of Examiner to this matter is greatly appreciated.

Since in the office action, the present invention is allowable in condition, while we have amended the claims based on the suggestion of the Examiner. Thus, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectively requested.

Respectfully submitted.
An-Hung CHEN
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monoxide (CO) and hydrocarbons (HC) effectively inverted into carbon dioxide (CO2) and water (H2O).

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENTS

Fig. 1 is a plot disclosing the idealized conversion efficiency versus air-to-fuel ratio relation, wherein a compromised optimum transition percentage occurs at an air-to-fuel ratio of 14.7.

Fig.2 is a diagram showing the layout of the present invention in an exhaust pipe, wherein the operational process from a front exhaust gas, a reduction catalyst, a secondary air inlet, a rear exhaust gas and an oxidation catalyst is illustrated.

Fig.3 is a plot disclosing the conversion efficiency versus air-to-fuel ratio relation associated with the present invention, wherein inverting nitrogen oxides (NOX) occurs when air-to-fuel ratio is less than 14.7 and inverting carbon monoxide (CO) and hydrocarbons (HC) occurs when air-to-fuel ratio is larger than 14.7.

Referring to Fig.2, a preferred embodiment of the present invention for improving purifying exhaust gas of nitrogen oxides within a motorcycle exhaust pipe includes a front reduction catalyst 2 disposed within a front exhaust pipe 10 near the exhaust terminal 1 of an engine. The reduction catalyst 2 is a carrier made of metallic or ceramic materials and doped with precious metals containing at least rhodium (Rh) for inverting exhaust gas form the engine. Further, the reduction catalyst 2 can be a three-way catalyst composed of rhodium (Rh), platinum (Pt) and palladium (Pd).

The present invention further includes a rear exhaust pipe 11 provided with a secondary air inlet 14 behind the reduction catalyst 2 for introducing secondary air 15 therein. When there more reduction catalysts 2 disposed in the front exhaust pipe, the secondary air inlet 14 is located behind the rearmost of the reduction catalysts 2.

The preferred embodiment further includes at least one oxidation catalyst 3 disposed in the rear exhaust pipe 11 behind the secondary air